A. AMENDMENTS TO CLAIMS

Please cancel Claims 11 and 32 and amend the claims as indicated hereinafter.

1-2.   (CANCELED).

3.   (PREVIOUSLY PRESENTED) A system including an input port for receiving network packets;

a sampling element for selecting a fraction of those packets for review, said sampling element including a feedback element for adaptively altering said fraction;

a queue of selected packets;

a packet-type detector to detect packets of a particular type, said packet type detector coupled to said queue; and

a frequency measurement element to determine an expected frequency of a particular packet type, said frequency measurement element coupled to said packet-type detector;

wherein said feedback element is responsive to a length of said queue.

4.   (CANCELED).

5.   (ORIGINAL) A system as in claim 3, wherein said feedback element is responsive to a load on said frequency measurement element.

6.   (ORIGINAL) A system as in claim 3, wherein said feedback element is responsive to a frequency measure determined by said frequency measurement element.

7.   (CURRENTLY AMENDED) A method, including steps for sampling a set of packets at a network interface of a switch, said steps for sampling including steps for adaptively altering a fraction of said packets for selection;

wherein said steps for adaptively altering a fraction of said packets for selection include steps for

maintaining a queue of selected packets; and

altering said fraction in response to a length of said ~~queue.~~ queue and;

wherein the method includes steps for determining a frequency of packets of a known type within said selected packets.

8.   (CANCELED).

9.   (ORIGINAL) A method as in claim 7, wherein said steps for adaptively altering a fraction of said packets for selection include steps for

measuring a frequency of packets of a known type within said selected packets;

altering said fraction in response to a load imposed by said steps for measuring.

10.   (ORIGINAL) A method as in claim 7, wherein said steps for adaptively altering a fraction of said packets for selection include steps for altering said fraction in response to two or more factors responsive to said selected packets.

11.   (CANCELED)

12.   (CURRENTLY AMENDED) A method as in ~~claim 11,~~ claim 7, including steps for determining an error range for said measured frequency.

13.   (CURRENTLY AMENDED) A method as in ~~claim 11,~~ claim 7, including steps for

setting a control parameter;

sampling said received packets in response to said control parameter, to provide a queue of sampled packets;

comparing a length of said queue with a threshold;

altering said control parameter in response to said threshold.

14.   (ORIGINAL) A method as in claim 13, wherein said control parameter is a fraction of said received packets to sampled for said queue.

15.   (ORIGINAL) A method as in claim 13, wherein said threshold includes at least one of: a lower bound for said length, an upper bound for said length.

16.   (ORIGINAL) A method as in claim 13, wherein said threshold includes a lower bound for said length and said steps for altering said control parameter operate to lengthen said queue in response to said steps for comparing.

17.   (ORIGINAL) A method as in claim 13, wherein said control parameter is a fraction of said received packets to sample for said queue;
said threshold includes a lower bound for said length; and
said steps for altering said control parameter decrease said control parameter in response to said steps for comparing.

18.   (ORIGINAL) A method as in claim 13, wherein said threshold includes an upper bound for said length and said steps for altering said control parameter operate to shorten said queue in response to said steps for comparing.

19.   (ORIGINAL) A method as in claim 13, wherein
said control parameter is a fraction of said received packets to sample for said queue;
said threshold includes an upper bound for said length; and
said steps for altering said control parameter increase said control parameter in response to said steps for comparing.

20.   (ORIGINAL) A method as in claim 13, wherein said steps for altering said control parameter operate to maintain said control parameter constant for at least a selected number of sampled packets.

21.   (ORIGINAL) A method as in claim 13, wherein said steps for sampling do not produce skew.

22. (PREVIOUSLY PRESENTED) A system including

means for collecting aggregate information about network traffic;

means for maintaining processor load relatively constant for a processor controlling said means for collecting despite substantial variation in network traffic;

wherein said means for collecting and said means for maintaining include an input port for receiving network packets, a sampling element for selecting a fraction of those packets for review, said sampling element including a feedback element for adaptively altering said fraction, a queue of selected packets, a packet-type detector to detect packets of a particular type, said packet-type detector coupled to said queue, and a frequency measurement element to determine an expected frequency of a particular packet type, said frequency measurement element coupled to said packet-type detector; and

wherein said feedback element is responsive to a length of said queue.

23. (PREVIOUSLY PRESENTED) A system as in claim 3, wherein a default value for said fraction is selected response to a bandwidth of said input type.

24. (PREVIOUSLY PRESENTED) A system as in claim 23, wherein said fraction is adaptively altered based on a presence or absence of a particular type of packet selected from among plural types of packets.

25. (PREVIOUSLY PRESENTED) A method as in claim 7, wherein a default value for said fraction is selected response to a bandwidth of said network interface.

26. (PREVIOUSLY PRESENTED) A method as in claim 25, wherein said fraction is adaptively altered based on a presence or absence of a particular type of packet selected from among plural types of packets.

27. (PREVIOUSLY PRESENTED) A system as in claim 22, wherein a default value for said fraction is selected response to a bandwidth of said input port.

28.   (PREVIOUSLY PRESENTED) A system as in claim 27, wherein said fraction is adaptively altered based on a presence or absence of a particular type of packet selected from among plural types of packets.

29.   (CURRENTLY AMENDED) A computer-readable medium carrying one or more instructions, wherein execution of the one or more sequences of instructions by one or more processors causes the one or more processors to perform ~~the step~~ <u>the steps</u> of:
sampling a set of packets at a network interface of a switch, said step for sampling
        including steps for adaptively altering a fraction of said packets for selection;
wherein said steps for adaptively altering a fraction of said packets for selection include
        steps for
        maintaining a queue of selected packets; and
        altering said fraction in response to a length of said ~~queue.~~ <u>queue; and</u>
<u>determining a frequency of packets of a known type within said selected packets.</u>

30.   (PREVIOUSLY PRESENTED) The computer-readable medium of claim 29, wherein said steps for adaptively altering a fraction of said packets for selection include steps for measuring a frequency of packets of a known type within said selected packets;
 altering said fraction in response to a load imposed by said steps for measuring.

31.   (PREVIOUSLY PRESENTED) The computer-readable medium of claim 29, wherein said steps for adaptively altering a fraction of said packets for selection include steps for altering said fraction in response to two or more factors responsive to said selected packets.

32.   (CANCELED).

33.   (CURRENTLY AMENDED) The computer-readable medium of ~~claim 32,~~ <u>claim 29,</u> wherein the computer-readable medium further includes sequences of instructions for performing steps for determining an error range for said measured frequency.

34. (CURRENTLY AMENDED) The computer-readable medium of ~~claim 32,~~ claim 29, wherein the computer-readable medium further includes sequences of instructions for performing steps for

setting a control parameter;

sampling said received packets in response to said control parameter, to provide a queue
of sampled packets;

comparing a length of said queue with a threshold;

altering said control parameter in response to said threshold.

35. (PREVIOUSLY PRESENTED) The computer-readable medium of claim 34, wherein said control parameter is a fraction of said received packets to sampled for said queue.

36. (PREVIOUSLY PRESENTED) The computer-readable medium of claim 34, wherein said threshold includes at least one of: a lower bound for said length, an upper bound for said length.

37. (PREVIOUSLY PRESENTED) The computer-readable medium of claim 34, wherein said threshold includes a lower bound for said length and said steps for altering said control parameter operate to lengthen said queue in response to said steps for comparing.

38. (PREVIOUSLY PRESENTED) The computer-readable medium of claim 34, wherein said control parameter is a fraction of said received packets to sample for said queue;

said threshold includes a lower bound for said length; and

said steps for altering said control parameter decrease said control parameter in response
to said steps for comparing.

39. (PREVIOUSLY PRESENTED) The computer-readable medium of claim 34, wherein said threshold includes an upper bound for said length and said steps for altering said control parameter operate to shorten said queue in response to said steps for comparing.

40. (PREVIOUSLY PRESENTED) The computer-readable medium of claim 34, wherein said control parameter is a fraction of said received packets to sample for said queue; said threshold includes an upper bound for said length; and said steps for altering said control parameter increase said control parameter in response to said steps for comparing.

41. (PREVIOUSLY PRESENTED) The computer-readable medium of claim 34, wherein said steps for altering said control parameter operate to maintain said control parameter constant for at least a selected number of sampled packets.

42. (PREVIOUSLY PRESENTED) A computer-readable medium as recited in claim 34, wherein said steps for sampling do not produce skew.

43. (PREVIOUSLY PRESENTED) A computer-readable medium as recited in claim 29, wherein a default value for said fraction is selected response to a bandwidth of said network interface.

44. (PREVIOUSLY PRESENTED) A computer-readable medium as recited in claim 43, wherein said fraction is adaptively altered based on a presence or absence of a particular type of packet selected from among plural types of packets.